Listing of Claims:

Claims 1-4 (Canceled).

5. (Currently Amended) ~~An~~ A fingerprint image processing apparatus comprising:

a line sensor including a plurality of image pickup elements;

a pixel value detecting unit which detects a ~~first pixel~~ respective maximum value and a ~~second pixel~~ respective minimum value from ~~each~~ fingerprint image data ~~including a plurality of pixels~~ output from each of the image pickup elements;

a pixel value range detecting unit which detects a pixel value range between the ~~first pixel~~ respective maximum value and the ~~second pixel~~ respective minimum value detected by the pixel value detecting unit for the fingerprint image data read by each of the image pickup elements;

a normalized data generating unit which generates, for each pixel of the fingerprint image data, normalized data that indicates a ratio of a pixel value of ~~each of the pixels of the image data to~~ the pixel to the pixel value range corresponding to the image pickup element which read the pixel;

a normalized data average calculating unit which calculates ~~an average~~ averages, corresponding respectively to the image

pickup elements, of the normalized data generated by the normalized data generating unit from the fingerprint image data read by the respective image pickup elements; and

a pixel value correcting unit which corrects a pixel value of each of the pixels of the fingerprint image data based on: (i) the average calculated by the normalized data average calculating unit corresponding to the image pickup element which read the pixel, and ~~the~~ (ii) a maximum possible pixel value ~~of each~~ of the pixels.

Claim 6 (Canceled).

7. (Currently Amended) The ~~image processing~~ apparatus according to claim 5, wherein the pixel value detecting unit ~~includes~~ comprises:

a designated value recording unit which records a designated value that indicates an order of the pixel values of the pixels of the fingerprint image data output from the image pickup elements;

a ~~first detection~~ unit which ~~detects~~ determines, as the respective maximum value for the fingerprint image data from each of the image pickup elements, a pixel value of a pixel of the fingerprint image data output from the image pickup ~~elements as the first pixel value, the pixel value being a designated manieth~~

~~largest one~~ element that is an x-th largest pixel value recorded by the designated value recording unit, which is determined with reference to a maximum value detected from the fingerprint image data output from the image pickup element, and which determines, as the respective minimum value for the fingerprint image data from each of the image pickup elements, ~~; and a second detection unit which detects~~ a pixel value of a pixel of the fingerprint image data output from the image pickup ~~elements as the second pixel value, the pixel value being a designated-manieth smallest one~~ element that is a y-th smallest pixel value recorded by the designated value recording unit, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element.

8. (Currently Amended) The ~~image processing~~ apparatus according to claim 5, wherein the pixel value detecting unit includes:

a designated value recording unit which records a designated value that indicates an order of the pixel values of the pixels of the fingerprint image data output from the image pickup elements;

a ~~first setting~~ unit which ~~sets~~ determines, as the respective maximum value for the fingerprint image data from each of the image pickup elements, an average of pixel values from a

maximum pixel value detected from the fingerprint image data output from the image pickup element to ~~a designated manieth~~ an x-th pixel value recorded by the designated value recording unit, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element, and which determines, as the respective minimum value for the fingerprint image data from each of the image pickup elements, ~~in the image data output from the image pickup elements as the first pixel value; and a second setting unit which sets~~ an average of pixel values from a minimum pixel value detected from the fingerprint image data output from the image pickup element to a ~~designated manieth~~ y-th pixel value recorded by the designated value recording unit, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element. ~~in the image data output from the image pickup elements as the second pixel value.~~

9. (Currently Amended) The ~~image processing~~ apparatus according to claim 5, further comprising a hollow transparent roller which is rotatably mounted at a main body of the image processing apparatus, and wherein the line sensor is fixed in ~~a transparent, hollow~~ the roller ~~that is rotatably mounted to the image processing apparatus~~.

10. (Currently Amended) The ~~image processing~~ apparatus according to claim 9, wherein the line sensor reads a fingerprint image of a finger that is in contact with the roller to obtain the fingerprint image data.

Claims 11-15 (Canceled).

16. (Currently Amended) A method of processing fingerprint image data, which is captured by a line sensor ~~including~~ that includes a plurality of image pickup elements, and ~~whose pixels~~ each ~~have~~ pixel of the fingerprint image data having a multilevel pixel value, the method comprising:

detecting a ~~first pixel~~ respective maximum value and a ~~second~~ respective minimum pixel value from the fingerprint image data captured by each of the image pickup elements of the line sensor;

detecting a pixel value range between the ~~first pixel~~ respective maximum value and the ~~second pixel~~ respective minimum value for the fingerprint image data captured by each of the image pickup elements;

generating, for each pixel of the fingerprint image data, normalized data that indicates a ratio of a pixel value of ~~each of the pixels of the image data to the pixel value range~~ the

pixel to the pixel value range corresponding to the image pickup element which read the pixel;

calculating ~~an average~~ averages of the normalized data corresponding respectively to the image pickup elements; and

correcting a pixel value of each of the pixels of the fingerprint image data based on: (i) the average corresponding to the image pickup element which read the pixel, and ~~the~~ (ii) a maximum possible pixel value of each of the pixels.

Claim 17 (Canceled).

18. (Currently Amended) The method according to claim 16, wherein the pixel value detecting includes:

recording a designated value that indicates an order of the pixel values of the pixels of the fingerprint image data output from the image pickup elements;

~~detecting~~ determining, as the respective maximum value for the fingerprint image data from each of the image pickup elements, a pixel value of a pixel of the fingerprint image data output from the image pickup ~~elements as the first pixel value, the pixel value being a designated-manieth largest one recorded by the designated value recording unit~~ element that is an x-th largest pixel value indicated by the designated value, which is

determined with reference to a maximum value detected from the fingerprint image data output from the image pickup element; and

~~detecting~~ determining, as the respective minimum value for the fingerprint image data from each of the image pickup elements, a pixel value of a pixel of the fingerprint image data output from the image pickup ~~elements as the second pixel value, the pixel value being a designated-manieth smallest one recorded by the designated value recording unit~~ element that is a y-th smallest pixel indicated by the designated value, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element.

19. (Currently Amended) The method according to claim 16, wherein the pixel value detecting includes:

recording a designated value that indicates an order of the pixel values of the pixels of the fingerprint image data output from the image pickup elements;

~~setting~~ determining, as the respective maximum value for the fingerprint image data from each of the image pickup elements, an average of pixel values from a maximum pixel value detected from the fingerprint image data output from the image pickup element to ~~a designated-manieth~~ an x-th pixel value indicated by the designated value, which is determined with reference to a maximum value detected from the fingerprint image data output from the

image pickup element; ~~recorded by the designated value recording unit in the image data output from the image pickup elements as the first pixel value;~~ and

~~setting~~ determining, as the respective minimum value for the fingerprint image data from each of the image pickup elements, an average of pixel values from a minimum pixel value detected from the fingerprint image data output from the image pickup element to a ~~designated manieth~~ y-th pixel value indicated by the designated value, which is determined with reference to a minimum value detected from the fingerprint image data output from the image pickup element. ~~recorded by the designated value recording unit in the image data output from the image pickup elements as the second pixel value.~~

20. (Currently Amended) The method according to claim 16, further comprising capturing a fingerprint image by the line sensor to obtain the fingerprint image data.